

**Sunset Drainage District
Levee Improvements
Ord. 2013-0208**





Bayou Des Allemands

- Replace bulk head and construct a +7' sheet pile wall
- Tie-in to LA Hwy 631 or BNSF rail embankment
- No existing right-of-way
- Extensive permitting requirements
- Loss of view/access to bayou for general public
- Estimated cost of \$8.3 million*

*Cost estimate is for construction only and does not include any engineering, surveying, permitting, real estate, geotechnical, wetland mitigation and testing costs.



Badeaux Lane East

- Construct a +9' certifiable flood wall along north side of Badeaux Lane East
- Construct flood gate across LA Hwy 306 (DOTD project)
- Construct frontal protection for Bayou Gauche PS
- Limited right-of-way
- Estimate cost of \$18.5 million*



*Cost estimate is for construction only and does not include any engineering, surveying, permitting, real estate, geotechnical, wetland mitigation and testing costs.

U.S. Highway 90

- Construct +7' hump in Hwy 90 at Paradis Canal (DOTD project)
- Improve SDD levee north (Early St.) and south of Hwy 90
- Mitigate access/traffic concerns for turning onto Early St. and into Dollar General
- Limited right-of-way between US Hwy 90 and BNSF rail embankment
- Estimated cost of \$600,000*

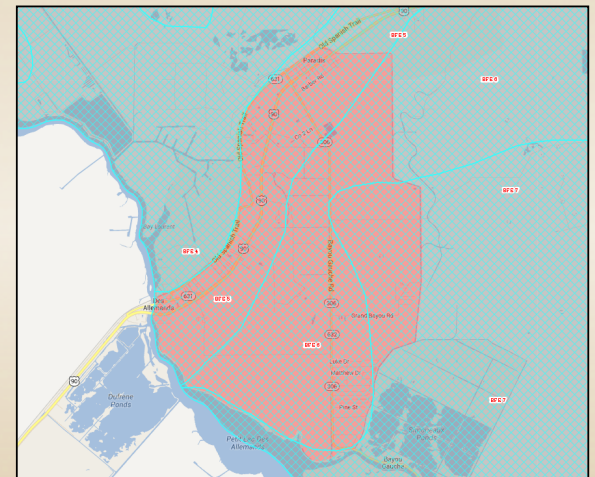
*Cost estimate is for construction only and does not include any engineering, surveying, permitting, real estate, geotechnical, wetland mitigation and testing costs.



Crowning SDD Levee

- Raise levee portions lower than proposed BFE's in DFIRM maps
- DFIRM BFE's range in elevation from +5 to +7
- FEMA requires a minimum +2' of freeboard; levees need to be raised to a +7' to +9'
- Limited right-of-way; base needs widening for stability purposes to crown levee
- Estimated cost of \$12 million*

*Cost estimate is for construction only and does not include any engineering, surveying, permitting, real estate, geotechnical, wetland mitigation and testing costs.



Estimated Construction Costs for “2013 Closure Ordinance”

Project 1: \$8.3 million

Bayou Des Allemands Bulkhead; Floodwall to a +7 elevation; T-Wall Frontal Protection at Tippy Pump Station; and Floodgate across Up the Bayou Road for BNSF Tie-In

Project 2: \$18.5 million

Badeaux Lane East Certifiable Floodwall to +9; Floodgate across LA Hwy 306; T-Wall Frontal Protection at Bayou Gauche PS

Project 3: \$0.6 million

Construct Hump in Highway 90; and Raise SDD levees north and south of US Hwy 90

Project 4: \$12 million

Raise Deficient SDD Levee sections

TOTAL \$39.4 million*

***Cost estimate is for construction only and does not include any engineering, surveying, permitting, real estate, geotechnical, wetland mitigation and testing costs.**

Project 1: Bayou Des Allemands

Project Features

- Replace bulk head and construct a +7' sheet pile wall
- Tie-in to LA Hwy 631 or BNSF rail embankment
- No existing right-of-way
- Extensive permitting requirements
- Loss of view/access to bayou for general public
- Estimated cost of \$8.3 million*

**Cost estimate is for construction only and does not include any engineering, surveying, permitting, real estate, geotechnical, wetland mitigation and testing costs.*

Permitting Requirements*

- Coastal Use Permit (LDNR)
- Section 10 & 404 Permits (USACE)
- Grant of Particular Use (Office of State Lands)
- Class B Scenic River Permit (LDWF)
- Water Quality Certification (LDEQ)
- Right-of-Way Permit (DOTD)
- Joint Use Agreement (DOTD)
- Geophysical Permit (DOTD)
- Letter of No Objection (CPRA)
- Phase I Cultural Resource Survey (SHPO)

**Estimated timeframe to secure all necessary permits is 24-36 months. Class B Scenic River Permit will be most difficult to secure, because of the environmental assessments and justifications that will have to be completed prior to issuance of the permit.*

Real Estate, Land and Relocation Alternatives*

- Multiple gates in the flood wall will have to be constructed or fourteen (14) boat slips, docks and wharves would have to be relocated at the Parish's expense due to loss of access to Bayou des Allemands
- No existing right-of-way to construct the flood wall
- Reduce Up the Bayou Road and Down the Bayou Road to one travel lane or purchase additional right of way on east side of street and relocate owners of up to four (4) residences and one (1) commercial structures

**Estimated real estate, land and relocation costs utilizing a lane of Up the Bayou and Down the Bayou Road \$420,000. Real estate costs increase significantly with new right-of-way along east side of the road is acquired.*

Project 2: Badeaux Lane East

Project Features

- Construct a +9' certifiable flood wall along north side of Badeaux Lane East
- Construct flood gate across LA Hwy 306 (DOTD project)
- Construct frontal protection for Bayou Gauche PS
- Limited right-of-way
- Estimate cost of \$18.5 million*

**Cost estimate is for construction only and does not include any engineering, surveying, permitting, real estate, geotechnical, wetland mitigation and testing costs.*

Permitting Requirements*

Badeaux Lane East & LA Hwy 306 Flood Gate

- Right-of-Way Permit (DOTD)
- Joint Use Agreement (DOTD)
- Geophysical Permit (DOTD)
- Letter of No Objection (CPRA)

**Estimated timeframe to secure all necessary permits is 12 months including plan and specification review by DOTD.*

Frontal Protection for Pump Station

- Coastal Use Permit (LDNR)
- Section 10 & 404 Permits (USACE)
- Grant of Particular Use (Office of State Lands)
- Class B Scenic River Permit (LDWF)
- Water Quality Certification (LDEQ)
- Letter of No Objection (CPRA)

**Estimated timeframe to secure all necessary permits is 12-18 months.*

Real Estate, Land and Relocation Alternatives

- Limited right-of-way for flood wall: SDD currently uses a public street right-of-way dedicated to the Parish of St. Charles for flood protection purposes
- Reduce Badeaux Lane East to one travel lane or purchase additional right of way on north side of the street from private property owners
- Sufficient right-of-way for frontal protection on pump station

**Estimated real estate, land and relocation costs for additional right-of-way along north side of Badeaux Lane East are \$220,000.*

Project 3: U.S. Highway 90

Project Features

- Construct +7' hump in Hwy 90 at Paradis Canal (DOTD project)
- Improve SDD levee north (Early St.) and south of Hwy 90
- Mitigate access/traffic concerns for turning onto Early St. and into Dollar General
- Estimated cost of \$600,000*

**Cost estimate is for construction only and does not include any engineering, surveying, permitting, real estate, geotechnical, wetland mitigation and testing costs.*

Permitting Requirements

- Right-of-Way Permit (DOTD)
- Joint Use Agreement (DOTD)
- Geophysical Permit (DOTD)
- Letter of No Objection (CPRA)
- Coastal Use Permit (LDNR)
- Section 10 & 404 Permits (USACE)
- Water Quality Certification (LDEQ)

**Estimated timeframe to secure all necessary permits is 18 months including plan and specification review by DOTD.*

Real Estate, Land and Relocation Alternatives

- Sufficient right-of-way south of Hwy 90 for raising levee to tie in to Hwy 90 hump
- Limited right-of-way between US Hwy 90 and LA Hwy 631 north of hump
- Reduce Early St. to one lane of travel or acquire additional right-of-way from private property owners
- Requires additional right-of-way along Paradis Canal to tie-in +7' elevation back into LA Hwy 631 and/or BNSF rail embankment after Early St. makes a turn and requires at least one (1) personalty relocation

**Estimated real estate, land and relocation costs for additional right-of-way along north of US Hwy 90 when utilizing the existing right-of-way of Early St. and acquiring new right-of-way between BNSF railroad and bend in Early St. are \$400,000 (please note this cost does not include rebuilding Early St on top of the raised portion of the road right-of-way).*

**Estimated real estate, land and relocation costs for additional right-of-way along north of US Hwy 90 when acquiring additional right-of-way along Early St. are \$600,000.*

Project 4: Crown SDD Levees

Project Features

- Raise levee portions lower than proposed BFE's in DFIRM maps
- DFIRM BFE's range in elevation from +5 to +7
- FEMA requires a minimum +2' of freeboard; levees need to be raised to a +7' to +9'
- Limited right-of-way; base needs widened for stability purposes to crown levee
- Estimated cost of \$12 million*

**Cost estimate is for construction only and does not include any engineering, surveying, permitting, real estate, geotechnical, wetland mitigation and testing costs.*

Permitting Requirements*

- Letter of No Objection (CPRA)
- Coastal Use Permit (LDNR)
- Section 10 & 404 Permits (USACE)
- Water Quality Certification (LDEQ)

**Estimated timeframe to secure all necessary permits is 6-12 months.*

Real Estate, Land and Relocation Alternatives

- Existing right-of-way is sufficient from the end of Down the Bayou Road to the Bayou Gauche Pump Station
- The existing right-of-way from Bayou Gauche Pump Station to Hwy 90 will be shown on surveys being completed by the Lafourche Basin Levee District as starting 6 feet on the protected side of the levee to the top bank of east side of Paradis Canal and Grand Bayou. In order to raise the levee crown, the footprint of the levee will have to be expanded requiring additional right-of-way from all private owners along Grand Bayou and Paradis Canal.

** Estimated real estate, land and relocation costs for additional right-of-way along Grand Bayou and Paradis Canal are \$1.5 million across approximately 60 ownerships.*
